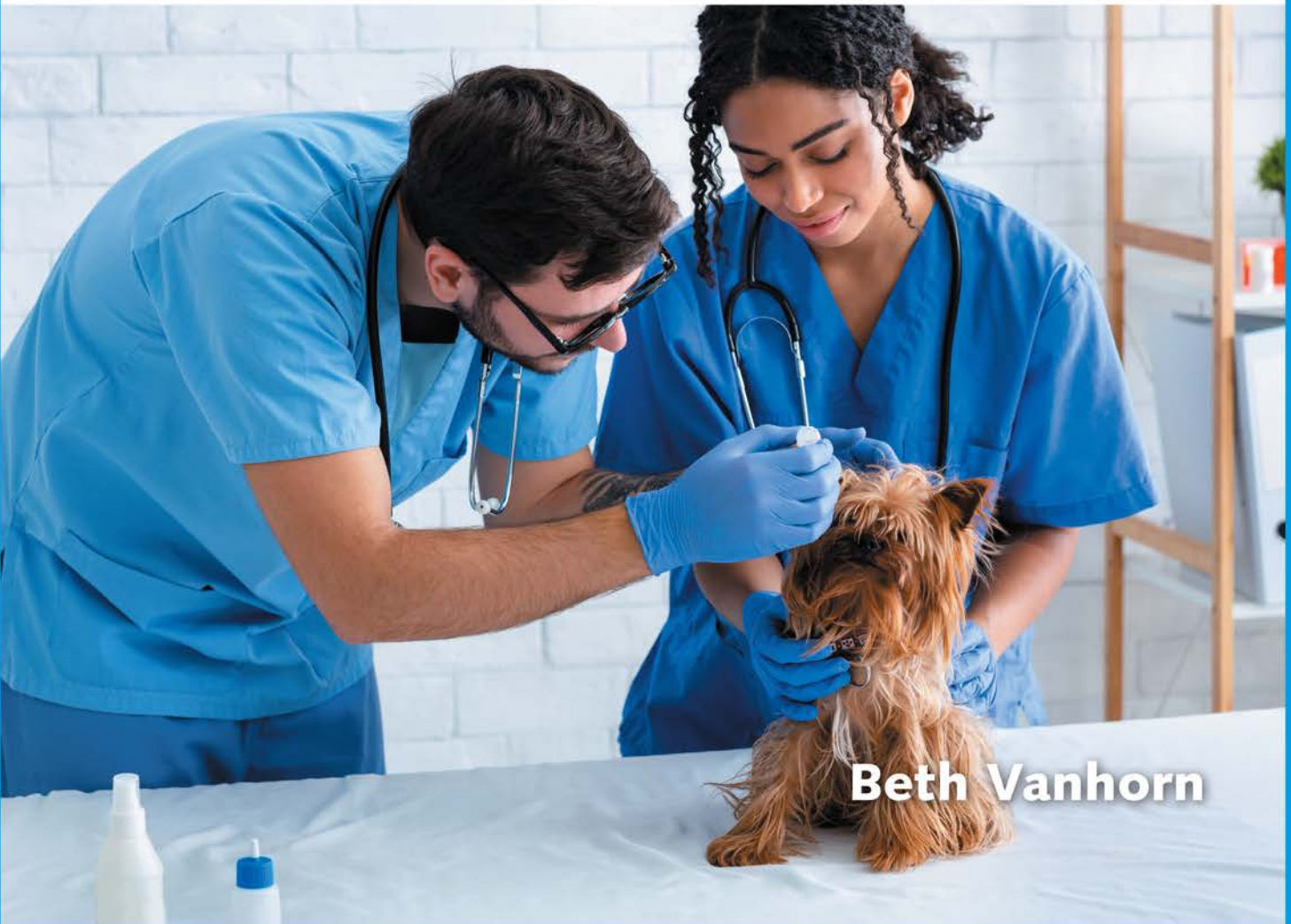


2ND EDITION

Veterinary Assisting

FUNDAMENTALS & APPLICATIONS



Beth Vanhorn

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Beth Vanhorn, CVT, AS



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Beth Vanhorn

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*This book is dedicated to
all the veterinarians and staff members
who made working in and learning about
the veterinary industry worthwhile.*



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Preface

The popularity of and nationwide demand for veterinarians and trained staff have caused the industry to reach out to high school career and technical schools, seeking to give students experience with and an understanding of the veterinary field. Thus, Ms. Vanhorn began creating a high school-based veterinary assistant program to give students experience with and a basic introduction to the world of veterinary medicine. While developing the program, Vanhorn found that the majority of veterinary-related educational materials and textbooks were written at a college-to-post secondary level. In an effort to allow secondary students to understand and learn about veterinary assisting as a career opportunity, this textbook was created for veterinary assistant students and as a resource for practicing veterinary assistants, veterinary receptionists, hospital managers, and technicians. The author believes that the basic layout of the units, as well as the clinical experiences, offers students a way to see veterinary medicine. This approach provides the learner with a preview of the veterinary industry and the education needed to achieve success in the profession. It also allows students to critically think and problem-solve realistic scenarios. This textbook has all types of veterinary careers under one cover, including small, large, zoo, exotic, and production animals.

The target market for this textbook is veterinary assistants; however, any veterinary professional can benefit from the information in this textbook. Employment of veterinary assistants and other veterinary professionals is projected to grow 16% by 2029, much more quickly than the average for all occupations. High turnover should result in good job opportunities. There are increasingly more medications and treatments for pets today, which means more pet owners will be coming into veterinary clinics seeking treatment for their animals. This increase in business will continue to drive up the demand for more professionally trained veterinary assistants. With spending levels on pets reaching an all-time high, more veterinary facilities are looking to hire more veterinary assistants.

Organization of This Text

The organization of this text is based on the National Association of Veterinary Technicians in America Approved Veterinary Assistant (NAVTA AVA) Essential Skills for Assistant Training curriculum. This includes business management skills, communication skills, safety procedures, hospital procedures, pharmacy skills, surgical assisting, nursing care, laboratory procedures, and radiology skills. The text includes topics related to small animals, large animals, production animals, and exotic and zoo animal species. The chapters are structured as follows:

Section I: Practice Management and Client Relations

Section II: Veterinary Animal Production

Section III: General Anatomy/Physiology and Disease Processes

Section IV: Clinical Procedures

Each section is broken down into significant chapters that address essential skills and curricula for veterinary assistants, veterinary technicians, veterinary receptionists, kennel attendants, groomers, animal health herd managers, practice managers, and agricultural educators.

Features

In recognition of the contributions veterinary assistants make to the practice team and to the health of pets, the National Association of Veterinary Technicians in America (NAVTA) has created the Approved Veterinary Assistant (AVA) designation. This designation is currently used across the United States. This edition includes updated chapters that focus on changes in veterinary medicine, both in medical standards and technology. Special features found consistently throughout all chapters include chapter objectives, competency skills, terminology tips, making the connection, key terms, review questions, and clinical situations.

New to This Edition

This edition has been condensed to decrease repetitive information by restructuring chapters to include a consistent outline based on chapter material and animal species. Each chapter has been placed in an order related to veterinary assistant teaching curricula in order of learning importance from a student and educator perspective. For example, Section I includes terminology, communication, ethics and legality, and safety procedures to better allow students to understand the terminology and veterinary medical language so that they can complete medical records efficiently and professionally, while understanding the ethics and laws involved in the veterinary medical field. Prior to learning about hands-on skills and advanced veterinary technical procedures, students will learn how to effectively communicate with veterinary

team members and clients, as well as the safety and aseptic techniques involved in providing safe and sterile procedures. Section II is broken down by animal species, including breed identification and production management. Section III discusses anatomy and physiology concepts, animal nutrition, and parasitology and disease processes. Section IV then builds on the previous section's layout to discuss hands-on clinical skills and clinical procedures.

- Additional review questions have been added to chapters, including clinical situations and critical thinking concepts.
- Additional artwork has been added to most chapters to further engage students and enhance student comprehension.

Veterinary Assisting Fundamentals and Applications

Contents

Section I: Practice Management and Client Relations

Chapter 1: Veterinary Medical Terminology and Abbreviations

- Additional suffixes, root words, and prefixes
- Additional common abbreviations and veterinary terms

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- Additional invoicing and fee concepts
- Additional focus on computerized medical records and paperless facilities

Chapter 3: Scheduling Appointments and Computer Applications

- Combination of previous Chapters 3, 4, and 5 to include computer applications
- Additional inventory management concepts

Chapter 4: Veterinary Careers

- New chapter content about expanded veterinary career field opportunities
- Additional career options for groomers and hospital administrators
- Additional specialty certifications
- Additional veterinary facility types and specialty options
- Additional artwork to meet industry standards

Chapter 5: Communication and Client Relations

- Additional resources to help with the grief process

Chapter 6: Veterinary Ethics and Legal Issues

- Expanded information on federal agencies
- Additional resources on medical waste materials
- Additional resources on controlled substances and drug schedules

Chapter 7: Veterinary Safety and Aseptic Techniques

- Chapter moved to Section I to be in better alignment with curriculum
- Combination of previous Chapters 41 and 42
- Expanded discussion on personal protective equipment (PPE)
- Additional resources related to changes to Safety Data Sheets (SDS)
- Additional concepts on labeling secondary containers, radiation safety, anesthetic safety, and OSHA regulations

Section II: Veterinary Animal Production

Chapter 8: Dog Breed Identification and Production Management

- Additional updates to American Kennel Club (AKC)–approved breeds
- Combination of associated species behavior information from previous Chapter 39
- Expanded information on aggression

- Additional resources related to use of E-collar for restraint purposes
- Updated and expanded vaccination schedule recommendations, including core and noncore vaccines
- Updated flea and tick, heartworm, and parasite preventative care recommendations

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- Additional updates to Cat Fanciers Association (CFA)–approved breeds
- Additional restraint information related to removing a cat from a carrier
- Updated and expanded vaccination schedule recommendations, including core and noncore vaccines
- Updated flea and tick, heartworm, and parasite preventative care recommendations

Chapter 10: Avian Breed Identification and Production Management

- Additional artwork for student engagement and understanding
- Additional information on fecal exams and radiology concepts
- Additional information related to respiratory emergencies, injuries, and fractures

Chapter 11: Pocket Pet Identification and Production Management

- Additional artwork for student engagement and understanding
- Additional information on barbering behavior

Chapter 12: Rabbit Breed Identification and Production Management

- Additional updates on recognized rabbit breeds
- Additional information on pododermatitis and malocclusion concepts

Chapter 13: Reptile and Amphibian Identification and Production Management**Chapter 14: Ornamental Fish and Aquaculture Identification and Production Management**

- Combination of aquaculture information from previous Chapter 25

Chapter 15: Zoo, Exotic, and Wildlife Identification and Production Management

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Chapter 16: Laboratory and Animal Research Identification and Production Management**Chapter 17: Beef and Dairy Cattle Breed Identification and Production Management**

- Additional updates on milk production by state
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- Combination of associated species behavior information from previous Chapter 39
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- Additional information on chewing, cribbing, and tetanus

Chapter 19: Swine Breed Identification and Production Management

- Combination of associated species behavior information from previous Chapter 39
- Additional artwork for student engagement and understanding

Chapter 20: Sheep Breed Identification and Production Management

- Combination of associated species behavior information from previous Chapter 39

Chapter 21: Goat Breed Identification and Production Management

- Combination of associated species behavior information from previous Chapter 39

Chapter 22: Poultry Breed Identification and Production Management**Section III: General Anatomy/Physiology and Disease Processes****Chapter 23: The Structure of Living Things**

- Expanded material on cell structure, cell function, and cell division
- Additional information on genetics and clinical concepts
- Expanded information on tissue types

Chapter 24: The Musculoskeletal System

- Expanded information on bone development and the muscular system
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 25: The Digestive System

- Additional artwork and clinical concepts for student engagement and understanding

Chapter 26: The Circulatory System

- Expanded information on veins, heart sounds, and shock
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 27: The Respiratory System

- Additional information on pneumothorax
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 28: The Endocrine System

- Expanded information on male and female hormones
- Expanded information on hyperadrenocorticism and hypoadrenocorticism
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 29: The Renal System

- Additional artwork and clinical concepts for student engagement and understanding

Chapter 30: The Reproductive System

- Expanded information on establishing pregnancy
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 31: The Immune System

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- Additional information on vaccine storage and use
- Additional information on the spleen
- Additional information on neoplasia
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 32: The Nervous System

- Expanded information on neurons
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 33: The Sensory System

- Additional information on conditions within the eye, including cataracts, nuclear sclerosis, and glaucoma
- Additional information on conditions within the ear, including otitis and aural hematoma

- Additional information on the senses of smell and taste
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 34: Animal Nutrition

- Additional information on palatability
- Additional information on weight management
- Expanded information on food analysis
- Additional information on the Association of American Feed Control Officials (AAFCO)
- Additional artwork and clinical concepts for student engagement and understanding

Chapter 35: Microbiology and Parasitology as Disease Processes

- Expanded information on parasite hosts
- Additional information on flukes, bots, and pinworms
- Additional information on maggots
- Expanded information on anthelmintics
- Additional artwork and clinical concepts for student engagement and understanding

Section IV: Clinical Procedures**Chapter 36: Basic Veterinary Restraint and Handling Procedures**

- Combination of behavior information from previous Chapter 39
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- Expanded skill and hands-on concepts for clinical procedures
- Additional information on fear-free handling

Chapter 37: Physical Examination Procedures and Patient History

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- Expanded information on weight assessment and blood pressure procedures
- Expanded information on ear and dental exams

Chapter 38: Veterinary Assistant Procedures

- Combination of hospital and grooming procedures information from previous Chapters 45, 46, and 47
- Additional information on pain assessment
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- Expanded information on PPE and radiation safety
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- Additional artwork and clinical concepts for student engagement and understanding
- Additional information on laser surgery
- Expanded information on the anesthesia machine
- Additional information on dental instruments

Supplements

To help you learn and teach from ***Veterinary Assisting: Fundamentals & Applications***, a variety of additional materials have been prepared for you.

MindTap

MindTap™ is a fully online, highly personalized learning experience combining readings, activities, and assessments into a singular Learning Path. Instructors can personalize the Learning Path by customizing Cengage resources and adding their own content via apps that integrate into the MindTap framework seamlessly with Learning Management Systems.

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Instructor Manual

The Instructor Manual provides the following for each chapter: Chapter Objectives, Key Terms, What's New in the Chapter, and a Chapter Outline.

Solution and Answer Guide

The Solution and Answer Guide provides answers to the Review Questions and the Clinical Situation questions.

PowerPoint® Lecture Review Slides

The PowerPoint slides consist of lecture outlines and select tables and figures used in the book. The slides are available for use by instructors for enhancing their lectures and by students as an aid to note taking. This edition's PowerPoint slides are all new and fully accessible.

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About the Author

Beth Vanhorn has been a Certified Veterinary Technician (CVT) since 1995, working in clinical small animal and exotic practice upon graduating from Wilson College. Beth's background includes numerous years working in private and corporate veterinary practices in surgery and intensive care unit (ICU) settings and extensive development and continuing education in veterinary dentistry. Beth has served on the Pennsylvania State Board of Veterinary Medicine as a CVT member. Beth also developed the Dauphin County Technical School (DCTS) Veterinary Assistant Program in 2004 and then became one of the first high school-level institutions to be approved for creating a curriculum and submitting the program for NAVTA AVA program approval. Once approved, graduates of these programs are given the opportunity to take the national test. With successful completion of the exam, individuals will become an approved veterinary assistant (AVA) and be recognized for their accomplishment with the AVA designation. Beth also worked closely with several high schools and technical schools throughout the United States to help develop veterinary assistant programs that have also attained AVA status. She has also been invited over the years to speak at conferences on how to develop a veterinary assistant program within a high school or technical school environment, including the National Association of Agricultural Educators, Association for Career and Technical Education, and the Pennsylvania Veterinary Medical Association. Her involvement with veterinary assistant program development allowed DCTS to win the Pennsylvania Veterinary Medical Association (PVMA) President's Award in 2007. Beth has been involved as an educator in the DCTS program's adult education program since its development in 2010. Beth currently works as a practice manager for Banfield, where she has served in the management career field since 2012. She also is a horse owner and has been involved with the American Quarter Horse Association most of her life, showing and breeding quarter horses. She has an additional textbook publication, *Veterinary Guide to Animal Breeds* (Wiley-Blackwell, 2017).



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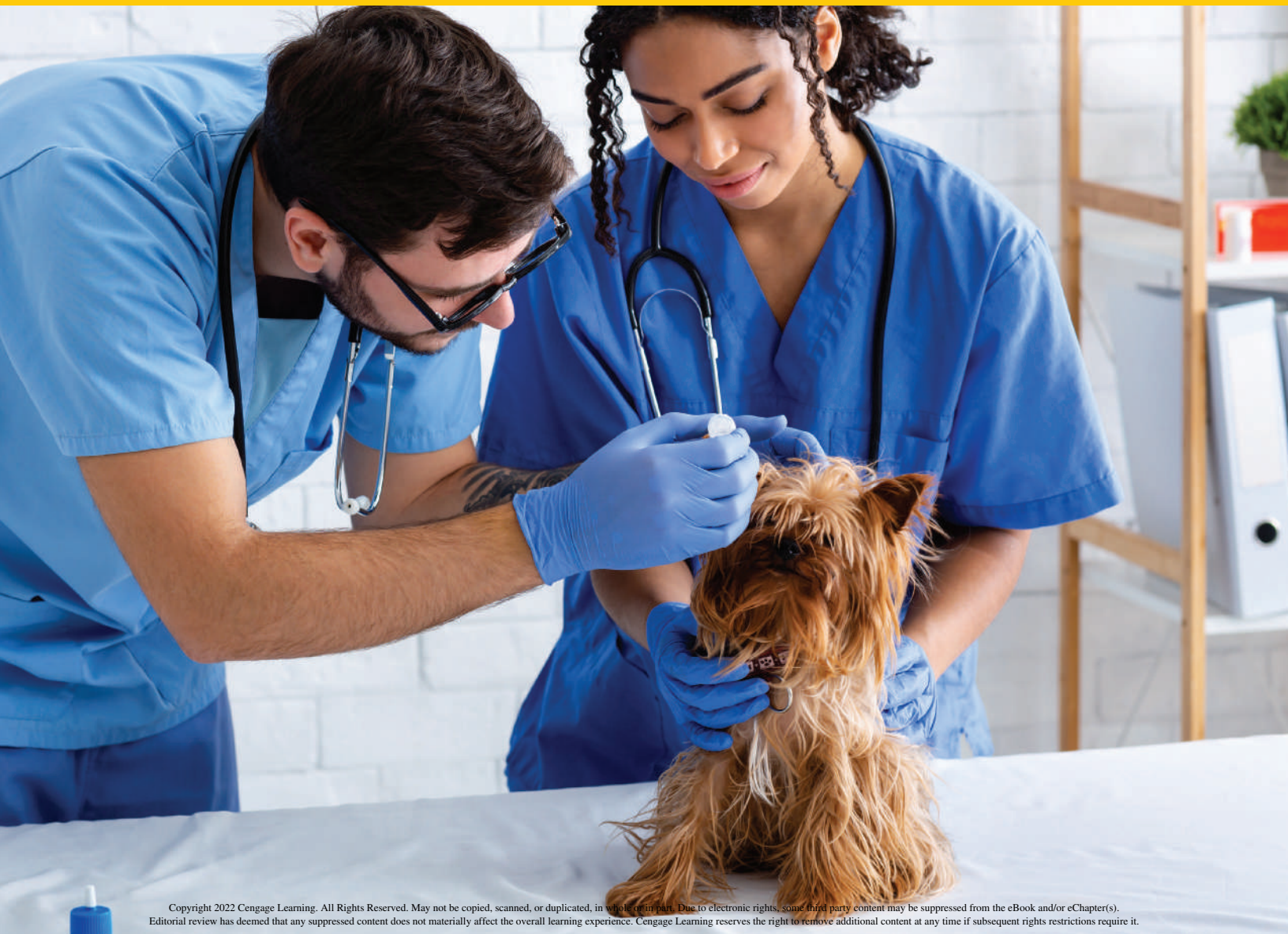
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Section I

Practice Management and Client Relations





CHAPTER 1 Veterinary Medical Terminology and Abbreviations

Objectives

Upon completion of this chapter, the reader should be able to:

- 1.1 Analyze veterinary medical terms to determine the prefix, suffix, and root word
- 1.2 Identify the meaning of common prefixes
- 1.3 Identify the meaning of common suffixes
- 1.4 Identify the meaning of common root words
- 1.5 Define common veterinary medical terms related to direction, species, patient history, and pharmacy
- 1.6 Identify and use common veterinary medical abbreviations

Introduction

The field of veterinary medicine has adopted a common language used by all veterinary professionals working at all levels of the industry. A basic knowledge and foundation of veterinary medical terminology will help the veterinary assistant communicate with other veterinary professionals, understand treatments and procedures within the veterinary facility, and properly enter and input medical information in patient charts. This chapter will focus on the basics of how to pronounce a word, how to break down and interpret word parts, and how these words apply to animals and areas of veterinary medical practice. All veterinary facilities should have a good veterinary medical dictionary that is available for reference at all times.

Veterinary Medical Terminology

Learning new vocabulary terms is a part of learning any new language, and veterinary medical terminology is the language used in the field of veterinary medicine. Some of the terms may be familiar; however, many may be foreign. Veterinary terms are often based on Latin and Greek words. Learning how to break down a term to define the meaning is the key to learning this new language. Some words may seem long and complex, but working with each part of the word will create a structure for learning terminology. Veterinary assistants should also have a veterinary dictionary to verify the spelling and definitions of new words that they may encounter.

Learning to Dissect a Veterinary Term

Words are made of prefixes, root words, and suffixes. Learning each of these parts and being able to define their meaning will allow the **dissecting**, or separating, of medical terms in a logical way. The **prefix** is the part of the word at the beginning of a term and consists of one or more syllables. The prefix typically indicates time, number, location, or status. The **root word** is the part of the word that gives the term its essential meaning.

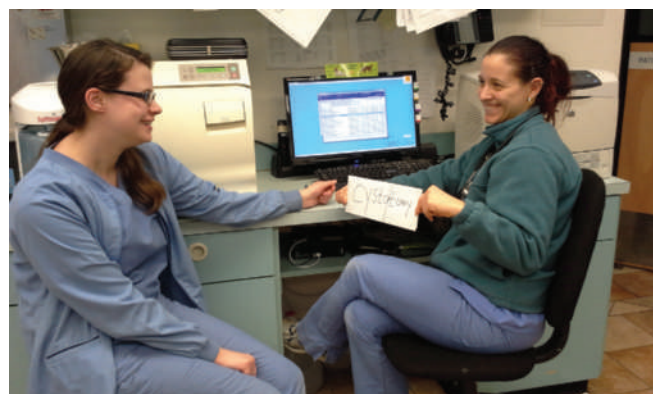
A term may consist of more than one root word. The **suffix** is the part of the word at the end of the term. The suffix typically indicates disease, condition, or procedure. Some words have a **combining vowel** that is attached to a root word and allows for certain terms to be pronounced more easily. The combining vowel is commonly the letter *o*. A **combining form** is a root word plus a combining vowel and often describes a body part. New words may be formed when combining forms are added to prefixes, root words, and suffixes. Learning to break down unfamiliar terms into recognizable word parts allows the veterinary assistant to increase and improve their medical vocabulary.

TERMINOLOGY TIP

Create flash cards to learn new terms. Use 3" × 5" or larger index cards and write the term, root word, prefix, or suffix on one side and a definition on the other side. Practice new terms 5–10 minutes each day (see Figure 1–1). ■

Common Root Words

A root word gives a term its essential meaning. Terms may have one or more root words. Some root words are formed with a combining vowel, usually the letter *o* that is placed at the end of the root word to allow the term to be more easily pronounced. Table 1–1 contains commonly used root words that veterinary assistants should be familiar with. Again, it is important to reference a veterinary dictionary when encountering new root words.



Courtesy of Beth Vanhorn

FIGURE 1–1 These veterinary professionals are using flashcards to practice terminology.

TABLE 1–1

Common Root Words

ROOT	MEANING
ABDOMIN/O-	abdomen
ARTHRO/O-	joint
AUR/O-	ear
BRONCHI/O-	lungs and bronchial tube
CARDI/O-	heart
CEPHEL/O-	head
CHEM/O-	chemical
CHONDR/O-	cartilage
COL/O-	colon
COST/O-	rib
CUTANE/O-	skin
CYST/O-	urinary bladder
CYT/O-	cell
DENT/O-	teeth
DERM/O-/DERMAT/O-	skin
ELECTR/O-	electricity
ENTER/O-	intestines
GASTR/O-	stomach
GINGIV/O-	gums
HEM/O-	blood
HEPAT/O-	liver
HIST/O-	tissue
HYSTER/O-	uterus
LAPAR/O-	abdomen
LARYNG/O-	larynx
MAST/MAMM-	mammary gland
MY/O-	muscle
NAS/O-	nose
NEPHR/O-	kidneys
NEUR/O-	nerve
OCUL/O-	eye
OPHTHALM/O-	eye
OR/O-	mouth
OSTE/O-	bone
OT/O-	ear
OVARI/O-	ovary
PNEUM/O-	lung
PULM/O-, PULMON/O-	lung
RADI/O-	radiation
RECT/O-	rectum
REN/O-	kidney
RHIN/O-	nose
SPLEN/O-	spleen

(Continues)

TABLE 1–1 (Continued)

SPONDYL/O-	vertebra, spinal column
STETH/O-	chest
STOMAT/O-	mouth
THORAC/O-	chest
TRACHE/O-	trachea
URETHR/O-	urethra
URIN/O-, UR/O-	urine
UTER/O-	uterus
VEN/O-	vein

Common Prefixes

The meaning of a prefix never changes; however, changing the prefix of a root word will change the meaning of the word. Prefixes are added to the beginning of words to qualify as follows:

- Numbers: bi- = two, tri- = three, quadra- = four
- Measurements: hyper- = excessive, hypo- = less than normal
- Position and/or direction: sub- = under, supra- = above, peri- = around
- Negatives: an- = without, anti- = against
- Color: cyan/o = blue, erythr/o = red, jaund/o = yellow

Example

Cardi/o is the root word meaning “heart.”

The suffix *-ia* means “condition.”

The prefix *brady* means “abnormally slow”; therefore, *bradycardia* means the condition of an abnormally slow heartbeat.

The prefix *tachy* means “abnormally fast”; therefore, *tachycardia* means the condition of an abnormally fast heartbeat.

Many prefixes have opposites that can be used to learn their meanings.

Example

ab- = away from, as in *abduction*

ad- = toward, as in *adduction*

pre- = before, as in *preoperative*

post- = after, as in *postoperative*

Table 1–2 lists prefixes commonly used in veterinary medicine. When encountering an unfamiliar prefix, it is important to use a dictionary to determine

the meaning. Using the dictionary to look up new vocabulary is a good habit to acquire.

Common Suffixes

Suffixes are located at the end of the word and commonly define surgical and medical procedures and conditions. Several suffixes have the same meaning and are called the “pertaining to” suffixes (see Table 1–3). To define these terms, look at the root word for the essential meaning. Table 1–4 lists suffixes commonly used in veterinary medicine. Locate the meaning of new suffixes in a dictionary.

Combining Forms

The combining form includes the combining vowel, which is usually the letter *o*, but may also be such vowels as *a*, *e*, *i*, and *u*. A combining vowel is placed between the prefix and suffix in certain words to allow the word to be more easily pronounced. Some words have a poor flow between the prefix, suffix, and root word combination; placing a vowel within the word allows the newly combined form to be easy to pronounce.

Putting It All Together

With a basic understanding of prefixes, suffixes, and root words, it becomes easy to break words down into parts to define new terminology. When dissecting a term, use a slash mark to isolate each part of the word. Then focus on the meaning of each dissected part of the term. Once the meaning of each word part is determined, place the meaning into a logically formed definition. Below are some examples of dissected veterinary terms.

Example

ARTHRITIS	inflammation of the joint
CARDIO/LOGY	the study of the heart
CARDIO/MEGALY	enlargement of the heart
CYSTO/CENTESIS	to puncture into the urinary bladder
CYTO/LOGY	the study of cells
HEMAT/URIA	blood in the urine
HEPATITIS	inflammation of the liver
GASTR/IC	pertaining to the stomach
LAPARO/TOMY	surgical incision into the abdomen

TABLE 1–2

Common Prefixes

PREFIX	MEANING	EXAMPLE	DEFINITION
A- or AN-	without; no	anemia	without or no blood cell production
AB-	away from	abduction	away from the center of the body
AD-	toward	adduction	toward the center of the body
ANTI-	against; to stop	anticoagulant	medicine used to stop bleeding
BRACHY-	short	brachycephalic	short head
BRADY-	slow	bradycardia	slow heart rhythm
CYANO-	blue	cyanotic	blue in color
DYS-	difficult; painful	dysuria	difficult or painful urination
ECTO-	outside	ectoskeleton	bones located outside the body
ENDO-	within, inside	endothermic	body temperature controlled within the body
EPI-	above	epidermis	top outer layer of skin
EX/EXO-	outside	exothermic	body temperature controlled outside of the body
ERYTHRO-	red	erythrocyte	red blood cell
HYPER-	above normal	hyperglycemia	high blood sugar
HYPO-	below normal	hypoglycemia	low blood sugar
INTER-	between	interdigital	between the toes
INTRA-	within	intramuscular	within the muscle
LEUKO-	white	leukocyte	white blood cell
MACRO-	large	macrobacteria	large-sized living organism
MICRO-	small	microscope	instrument used to visualize small items
MAL-	bad	malocclusion	poor tooth alignment
NEO-	new	neoplasia	new tissue formation or growth
OLIGO-	very little	oliguria	very little urine production
PERI-	around	perioperative	around or during the surgery
POLY-	many, excessive	polyuria	excessive urine production
POST-	after	postoperative	after the surgery
PRE-	before	preanesthetic	before anesthesia
PYO-	pus	pyometra	pus-filled uterus
SUB-	below	subcutaneous	below the skin
SUPER-	above	superimposed	above the surface
TACHY-	fast	tachycardia	fast heart rhythm

MAST/ECTOMY the surgical removal of the mammary gland

ONYCH/ECTOMY the surgical removal of the nail; declaw

OVARIO/HYSTER/ECTOMY the surgical removal of the ovaries and uterus

Abbreviated OHE/OVH

RADIO/GRAPH to record using radiation

RHINO/PLASTY the surgical repair of the nose

STOMAT/ITIS inflammation of the mouth

URINA/LYSIS to break down urine

TABLE 1-3

Suffixes Meaning “Pertaining To”

SUFFIX	TERM	MEANING
-AC	cardiac	pertaining to the heart
-AL	renal	pertaining to the kidney
-AN	ovarian	pertaining to the ovary
-AR	lumbar	pertaining to the loin or lower back
-ARY	alimentary	pertaining to the gastrointestinal tract
-EAL	laryngeal	pertaining to the larynx
-IC	enteric	pertaining to the intestines
-INE	uterine	pertaining to the uterus
-OUS	cutaneous	pertaining to the skin
-TIC	nephrotic	pertaining to the kidneys

Remember, when defining, pronouncing, or spelling unfamiliar veterinary medical terms, it is best to consult a veterinary medical dictionary before recording the term in medical records or communicating it to others. Veterinary medical terminology is a foreign language for some that is necessary in the veterinary facility; over time and with consistent use it will become a comfortable second language.



TERMINOLOGY TIP

Practice makes perfect. Complete practice assignments to study and review veterinary terms. ■

TABLE 1-4

Common Suffixes

SUFFIX	MEANING	EXAMPLE	DEFINITION
-ALGIA	pain	arthralgia	pain in the joints
-CENTESIS	surgical puncture into	cystocentesis	surgical puncture with a needle into the urinary bladder
-CYTE	cell	erythrocyte	red blood cell
-ECTOMY	surgical removal of	ovariohysterectomy	surgical removal of the ovaries and uterus
-EMESIS	to vomit	antiemetic	to stop vomiting
-EMIA	blood	hypocalcemia	low blood calcium
-GRAM	a record of	electrocardiogram	a record of the electrical activity of the heart
-GRAPH	to record with an instrument	radiograph	a record made using radiation; X-ray
-GRAPHY	the act of recording using an instrument	radiography	the act of taking a picture using radiation
-IA	condition	leukopenia	condition causing decreased white blood cells
-IST	specialist	pathologist	specialist who studies diseases
-ITIS	inflammation	colitis	inflammation of the colon
-LOGY	the study of	histology	the study of tissues
-LYSIS	to break down	urinalysis	the breakdown of urine into parts
-MALACIA	abnormal softening	osteomalacia	the abnormal softening of bone
-MEGALY	enlargement of	cardiomegaly	enlargement of the heart
-OMA	tumor, mass	hematoma	localized collection of blood
-OPSY	to view or see	biopsy	the process of viewing living organisms
-OSIS	condition	osteoporosis	condition of bone loss
-PATHY	disease	cardiopathy	heart disease
-PENIA	lack of or deficiency	leukopenia	lack of white blood cells
-PEXY	to suture to	gastropexy	to suture to the stomach
-PHAG	to eat	coprophagic	to eat feces
-PLASIA	to grow or change	neoplasia	new growth (as in tissues)
-PLASTY	to surgically repair	rhinoplasty	surgical repair of the nose

-PNEA	breathing	dyspnea	difficulty breathing
-RRHAGE-	to burst	hemorrhage	the bursting of blood; bleeding
-RRHEA-	to flow	diarrhea	the flow of feces
-SCLEROSIS	abnormal hardening	arteriosclerosis	abnormal hardening of the arteries
-SCOPE	instrument used to view	microscope	instrument used to view small items
-SCOPY	the act of using an instrument for viewing	endoscopy	the act of using a scope to view the inside of the body
-STOMY	to create a new surgical opening	cystostomy	to create a new surgical opening in the urinary bladder
-THERAPY	treatment	chemotherapy	treatment of chemicals
-TOMY	to cut into surgically; to make an incision	cystotomy	to make an incision into the urinary bladder

Common Directional Terms

Directional terms relate to the body position and are useful in recording locations relating to the body; they are also useful in surgical or radiographic positioning. These terms relate to a specific area on the body of an animal and allow for better communication when referring to an animal's anatomy (see Table 1–5, Figure 1–2, and Figure 1–3).

TABLE 1–5

Common Directional Terms

TERM	MEANING
ANTERIOR	front of the body
ASPECT	area
CAUDAL	toward the tail
CRANIAL	toward the head
DEEP	far away from the surface
DISTAL	away from the center of the body
DORSAL	toward the back area
EXTERNAL	outer surface of the body
INTERNAL	deep inside the body
LATERAL	side of the body; toward the outside
MEDIAL	inside of an area; toward the inside
OBLIQUE	slanted or on an incline
PALMAR	the bottom of the front feet
PLANTAR	the bottom of the rear feet
POSTERIOR	rear end of the body
PROXIMAL	closer to the center of the body
RECUMBENCY	lying in position
RECUMBENT	lying
ROSTRAL	toward the nose
SUPERFICIAL	near the surface
TRANSVERSE	across an area dividing it into cranial and caudal sections
VENTRAL	toward the abdomen or belly area

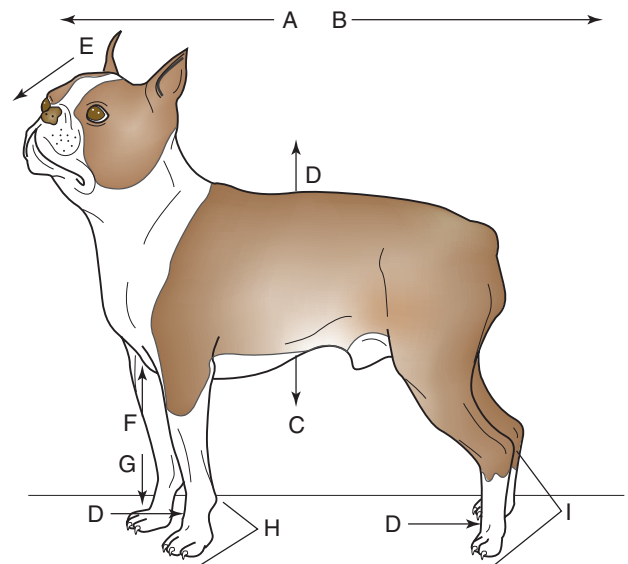


FIGURE 1–2 The arrows on this Boston Terrier represent the following directional terms: A = cranial, B = caudal, C = ventral, D = dorsal, E = rostral, F = proximal, G = distal, H = palmar, I = plantar.

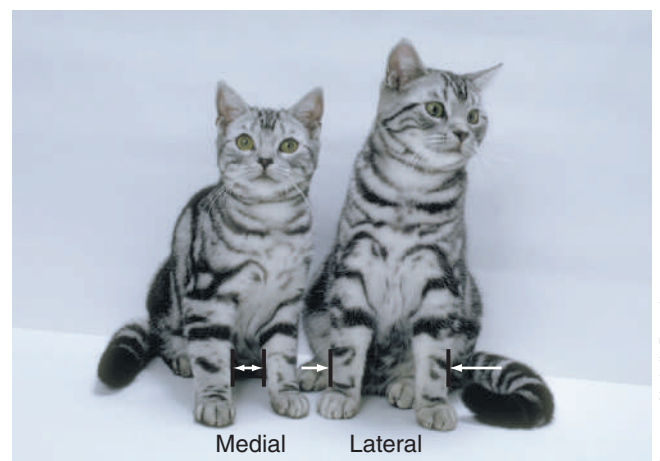


FIGURE 1–3 Medial versus lateral. The lines on these cats represent the directional terms *medial* and *lateral*.

Common Terms and Abbreviations Used in Veterinary Practice

The veterinary field has developed common universal terms that are used in the industry to relate to patient history, species information, the physical exam, and pharmacy terms. Many of these terms also have common abbreviations used in medical recording. This section will outline commonly used terms and abbreviations used in recording medical records and treatment boards (see Table 1–6 through Table 1–15, and Figure 1–4).

TABLE 1–6

Species Terms

AMPHIBIAN	frog or toad
AVIAN	bird
BOVINE	cow
CANINE	dog
CAPRINE	goat
CAVY	guinea pig
EQUINE	horse
FELINE	cat
LAGOMORPH	rabbit
MURINE	rat or mouse
OVINE	sheep
PORCINE	pig or swine
POULTRY	chicken and turkey
PRIMATE	monkey and ape
REPTILE	snake and lizard
TERRAPIN	turtle

TABLE 1–7

Common Veterinary Abbreviations

C or cast	castrated
C-sect	C-section or caesarian section
d	day
d/c	discharge/discontinue
DLH	domestic longhair (cat)
DSH	domestic shorthair (cat)
d/o	drop off
DOA	dead on arrival
EX	exotic
F	female
K-9	dog or canine

M	male
Mo	month
NM	neutered male
o	owner
ohc or ovh	ovariohysterectomy, spay
p/u	pick up
rec	recommend
S or SF	spayed or spayed female
S/R	suture removal
sx	surgery
wk or w	week
y or yr	year

TABLE 1–8

Terms Related to Patient History

ANOREXIA	not eating or decreased appetite
BM	bowel movement
D	diarrhea
DYSURIA	difficulty or trouble with urination
Dz	disease
HBC	hit by car
HEMATURIA	blood in the urine
Hx	history
LETHARGIC	tired or inactive
PD	polydipsia (increased thirst)
PU	polyuria (increased urination)
U	urine
V	vomiting
V/D	vomiting and diarrhea

TABLE 1–9

Terms Related to Physical Examination

ACUTE	short term
AG	anal glands
BAR	bright, alert, responsive
BP	blood pressure
Bpm	beats per minute
Br/m	breaths per minute
CHRONIC	long term
CPR	cardiopulmonary resuscitation
CRT	capillary refill time
Dx	diagnosis
FeLV	feline leukemia virus

FIP	feline infectious peritonitis
FIV	feline immunodeficiency virus
HR	heart rate
L	left
LN	lymph node
mm	mucous membranes
N or (–)	negative
NR	nothing reported
NSF	no signs found/no significant findings
PE	physical exam
Px	prognosis
QAR	quiet, alert, responsive
R	right
rad	radiograph, X-ray
RR	respiratory rate
Rx	prescription
SOAP	Subjective–Objective–Assessment–Plan
TPR	temperature, pulse, respiration
Tx	treatment
URI	upper respiratory infection
UTI	urinary tract infection
WNL	within normal limits
Wt	weight
+	positive

TABLE 1–10

Laboratory Terms and Abbreviations

AI	artificial insemination
BUN	blood urea nitrogen
Bx	biopsy
CBC	complete blood count
CHEM	blood chemistry panel
C/S or C & S	culture and sensitivity
Cysto	cystocentesis
Fecal	fecal or stool sample
HW	heart worm
PCV	packed cell volume
RBC	red blood cell
T4	thyroid test
UA	urinalysis
WBC	white blood cell

TABLE 1–11

Pharmacy Terms and Abbreviations

BID	twice a day
Cap	capsule
cc	cubic centimeter
d	day
EOD	every other day
g	gram
gr	grain
h	hour
kg	kilogram
L	liter
mg	milligram
ml	milliliter
NPO	nothing by mouth
oz	ounces
PO	by mouth
prn	give/take as needed
q	every
qd	every day
QID	four times a day
qod	every other day
Rx	prescription
SID	once a day
Tab	tablet
tblsp	tablespoon
TID	three times a day
tsp	teaspoon
wk or w	week
/	per
# or lb	pound
#	number of tablets to dispense



TERMINOLOGY TIP

When reading a pharmacy prescription label, write out all the information on the label, including the abbreviations, and verify it is correct before typing it and labeling the container. ■

TABLE 1–12

Eyes and Ears

AD	right ear
AS	left ear
AU	both ears
OD	right eye
OS	left eye
OU	both eyes

TABLE 1-13

Routes of Medicinal Administration

Adm.	administer
ID	intra-dermal (within the layers of skin)
IM	intra-muscular (into the muscle)
IN	intra-nasal (into the nasal cavity)
IO	intra-osseous (into the bone)
IP	intra-peritoneal (into the peritoneum or lining of the abdomen)
IT	intra-tracheal (into the trachea or windpipe)
IV	intra-venous (into the vein)
PO	by mouth or orally
SQ	subcutaneous (under the skin)
SUB-Q	subcutaneous (under the skin)

TABLE 1-14

Association Abbreviations

AAHA	American Animal Hospital Association
AALAS	American Association of Laboratory Animal Science
AKC	American Kennel Club
AVMA	American Veterinary Medical Association
CFA	Cat Fanciers Association
NAVTA	National Association of Veterinary Technicians of America
OFA	Orthopedic Foundation of America

TABLE 1-15

Common Animal Terms

Bitch	intact female dog	Chick	young parrot; young chicken
Litter	group of newborn dogs	Cock	male parrot; male chicken
Puppy	young dog	Flock	group of birds; group of chickens, turkeys, or ducks
Stud dog	intact male dog	Hen	female parrot; female chicken; female turkey
Whelping	the labor process of dogs	Clutch	group of eggs
Kitten	young cat	Poult	young turkey; young chicken
Tom	intact male cat; male turkey	Capon	young castrated male chicken
Queen	intact female cat	Cockerel	immature male chicken
Queening	the labor process of cats	Pullet	immature female chicken
Buck	male rabbit; male goat; male deer	Rooster	male chicken
Doe	female rabbit; female goat; female deer	Drake	male duck
Kindling	labor process of rabbits and ferrets	Duck	female duck
Kit	young rabbit; young ferret	Duckling	young duck
Lapin	neutered male rabbit	Barrow	young castrated male pig
Gib	neutered male ferret	Farrowing	labor process of swine
Hob	intact male ferret	Gilt	young female pig that has not farrowed
Jill	intact female ferret	Piglet	young pig
Sprite	neutered female ferret	Stag	male pig castrated after maturity
Boar	male guinea pig; male pig	Colt	young male horse
Pup	young guinea pig; young mouse; young rat; young dog	Filly	young female horse
Sow	female guinea pig; female pig	Foal	young male or female horse
Dam	female rat; female mouse; term for a female parent that is breeding	Gelding	castrated male horse; castrated male llama
Sire	male rat; male mouse; term for a male parent that is breeding	Hand	the measurement of a horse equal to 4 inches

Herd	group of horses	Lambing	labor process of sheep
Horse	horse over 14.2 hands in height	Ram	intact male sheep
Mare	intact adult female horse	Wether	castrated male sheep; castrated male goat
Pony	horse under 14.2 hands in height	Freshening	labor process of dairy-producing animals
Stallion	intact adult male horse	Kid	young goat
Weanling	young horse under a year of age	Kidding	labor process of goats
Yearling	young horse between one and two years of age	Bull	intact male cow; intact male llama
Donkey	donkey crossed with a donkey	Cow	intact female cow; intact female llama
Hinny	cross of a male horse and female donkey	Cria	young llama
Jack	intact male donkey	Calf	young cow
Jenny	intact female donkey	Calving	labor process of cows
Mule	cross of a male donkey and female horse	Heifer	young female cow that has not been bred
Ewe	intact female sheep	Stag	mature castrated male cow
Lamb	young sheep	Steer	young castrated male cow

Client	Pet	Species	Weight	Treatment
Baldman	Baldman	Fel	6.22	OVH
Huber	Salemia	Fel	6.81	Cast
Chadwick	Tina	K9	6.8	DAT / CE
Ruth	Sammy	K9	57.7	DAT
Bender	Faith	Fel	4.06	OVH
Hernandez	Sam	K9	176	Com
Halter	Rory	K9	176	E/EIN
Rivera	Scout	K9	None	Cut on paw pad

FIGURE 1-4 It is important to understand veterinary abbreviations, as shown on this treatment board, to ensure proper care and handling of the animals in the clinic.

Spelling

Spelling a word correctly is essential in terms of medical recording. A misspelled word is unprofessional, may give a word an entirely different meaning, and may delay proper care of a patient. Medical terms may consist of words that look alike but have entirely different definitions. Some words have similar pronunciation and sounds but are very different in meaning. A veterinary or medical dictionary can be helpful in determining the correct spelling and use of words.

TERMINOLOGY TIP

Every staff member within the veterinary community should have a reliable veterinary dictionary available at all times. There are a variety of veterinary dictionaries and terminology books that can serve as a reference. ■

SUMMARY

Veterinary medical terminology and veterinary abbreviations are a vital part of the veterinary industry. Each member of the veterinary health care team must have a basic knowledge of terminology and abbreviations to complete his or her job. This may mean reading a hospital treatment board, a patient's medical record, a cage card, or directions on a medication label. For the veterinary assistant to perform his or her duties properly, it is essential to have a working knowledge and understanding of the veterinary language.

Key Terms

dissect to separate into pieces, or break down into parts, to identify the meaning of a word

prefix the word part at the beginning of a term

suffix the word part at the end of a term

root word the origin or main part of the word that gives the term its essential meaning

combining form the root word plus a combining vowel; often describes a body part

combining vowel a letter, usually a vowel, that is placed between the prefix and suffix and makes the word easier to pronounce

Review Questions

Matching

Match the prefix, suffix, or root word to its definition.

- | | |
|-------------------|---------------------------------------|
| 1. ___ -itis | a. pertaining to the stomach |
| 2. ___ cardiac | b. blood |
| 3. ___ -ectomy | c. treatment |
| 4. ___ hepatic | d. many, excessive |
| 5. ___ hyper- | e. inflammation |
| 6. ___ post- | f. above normal, increased, excessive |
| 7. ___ hemo- | g. abdomen |
| 8. ___ therapy | h. pertaining to the heart |
| 9. ___ cysto- | i. surgical removal of |
| 10. ___ gastric | j. pertaining to the liver |
| 11. ___ laparo- | k. bone |
| 12. ___ -centesis | l. urinary bladder |
| 13. ___ poly- | m. enlargement |
| 14. ___ -megaly | n. to puncture into |
| 15. ___ osteo- | o. after |

Interpretation of Abbreviations

16. Write a description of the meaning of the following situation involving an animal:

The veterinarian has given you Sassy Smith's Dx and Tx plan and you are to complete the directions and d/c Sassy. You read the following in the medical record: Dx: gastritis; NPO × 24 h, soft diet × 7 d and then return to normal diet; adm. 100 ml Lactated ringers SQ; d/c; recheck 3 d.o. to monitor v/d.

17. You read the following notation in a medical record as asked by the veterinarian:

1/7/18 OHE sx.; NR; S/R 8-10 d; limit exercise and monitor sx site

What do you tell the owner? Please write your complete response.

18. Interpret the following statement:

Rx: 1 drop OUTID × 10 d

Problem Solving

Provide a solution for the following three pharmaceutical problems.

19. The veterinarian instructs you to call Mrs. Smith and have her change Sweetie's dose from (1) 100 mg capsule PO SID to (1) 100 mg capsule PO TID \times 5 d. What will you tell Mrs. Smith?
20. You are asked to label the following prescription for Dr. Daniels: Place (3) drops AU BID \times 10 d. What will you write on the label?
21. You read the medical record for Phoebe Jones. It instructs the veterinary assistant to "Give 3 ml of Amoxicillin EOD \times 1 w prn. Keep medication refrigerated." What will you do for Phoebe's treatment?

Identification

Identify the common abbreviations:

22. F _____
23. SID _____
24. R _____
25. DSH _____
26. Wt _____
27. BAR _____
28. Hx _____
29. BM _____
30. TPR _____
31. HBC _____
32. L _____
33. NM _____
34. BID _____
35. V/D _____
36. q _____
37. TID _____
38. DLH _____
39. UA _____
40. Dx _____
41. S _____
42. IN _____
43. ml _____
44. AS _____
45. Tx _____

Identify which animal species the following terms belong to:

- 46. Gelding _____
- 47. Lapin _____
- 48. Hen _____
- 49. Queen _____
- 50. Gilt _____
- 51. Doe _____
- 52. Capon _____
- 53. Cria _____
- 54. Heifer _____
- 55. Jill _____

Break down the following terms into prefix, root word and/or suffix. EXAMPLE: cysto/centesis

- 56. hepatomegaly
- 57. postoperative
- 58. renal
- 59. hypoglycemia
- 60. chemotherapy

Bonus Question

What is meant by the term *SOAP*?

Clinical Situation

Complete the following activity by providing the common abbreviation for the underlined medical terms.

A six-year-old spayed female domestic long hair cat was seen at the veterinary clinic for a physical examination due to vomiting and diarrhea. The cat has a history of being within normal limits. A temperature, pulse, and respiration rate was evaluated with normal signs found. The cat's weight is recorded as 11 pounds. The vet evaluated a complete blood count and radiographs to rule out infection and disease. The diagnosis is found to be acute colitis. The treatment is prepared. The cat's owner is to give 2 tablets of Metronidazole by mouth once a day. The owner is to monitor the cat's bowel movements. A recheck visit was scheduled.



COMPETENCY SKILL 1

Learning Veterinary Medical Terminology and Abbreviations

Objective:

Have a basic knowledge and understanding of common veterinary terminology and abbreviations.

Materials:

- 3" × 5" or larger index cards
- Colored markers, pens, or pencils

Procedure:

1. Obtain a vocabulary terminology word list. Use the terms presented in the tables in this chapter.
2. Write a vocabulary term on one side of each index card.
3. Write the definition of the word on the opposite side of each index card.
4. Study each word term and then try reciting the definition.
5. Study each definition and then try reciting the word.

Practice daily by studying the terms and definitions.



CHAPTER 2 Medical Records

Objectives

Upon the completion of this chapter, the reader should be able to:

- | | |
|---|--|
| 2.1 Identify the various forms included in the medical record | 2.5 Discuss the importance of the legal requirements of the veterinary medical record |
| 2.2 Properly create veterinary medical records | 2.6 Discuss the importance of consent forms |
| 2.3 Demonstrate how to input information in the medical record | 2.7 Identify the types of certificates provided by the veterinary facility |
| 2.4 Properly locate, file, and refile medical records | |

Introduction

The veterinary assistant is responsible for many office procedures and administrative duties, including the critically important creation, maintenance, and organization of medical records. The medical records furnish documentary evidence of the patient's illness, hospital care, and treatment and serve as a basis for review, study, and evaluation of the care and treatment rendered by the veterinarian.

The Veterinary Medical Record

The primary purpose of the veterinary **medical record** is to record detailed information for each veterinary **patient** (the animal seen by the facility; see Figure 2–1). This information should include patient and **client** (the animal's owner) information, patient history, medical and surgical records, progress notes, and laboratory information. The medical record serves as a diary of the animal's health. This is especially important in multiple-doctor facilities and when medical records are transferred from location to location. The veterinary medical record is owned by the veterinary facility and is the property of the facility that originally activated the record. It is a legal document that is private and confidential, even within the veterinary team. This is also true for any radiographs, ultrasound images, and other diagnostic tests that are produced by the facility.

This legal document allows for the **Veterinary–Client–Patient Relationship (VCPR)** to be established. The VCPR legally allows the veterinarian to treat the patient and dispense medications. The VCPR must be maintained on a yearly basis. It serves as documentation and protects the veterinarian and staff through written recordings. The VCPR relationship satisfies the following criteria: (1) the veterinarian has assumed responsibility for the patient in making judgment regarding the health of an animal and the need for veterinary treatment, and the owner has agreed to follow the instructions of the veterinarian; (2) the veterinarian has sufficient knowledge of the animal species to initiate a general, preliminary, or tentative diagnosis of the medical condition of the animal; (3) the veterinarian is competent with keeping and caring for the animal through examination and timely visits to the facility where the animal is housed; (4) the veterinarian is available for consultation in adverse reactions or failure of the deemed therapy; and (5) the veterinarian maintains medical records of the animal's treatments.

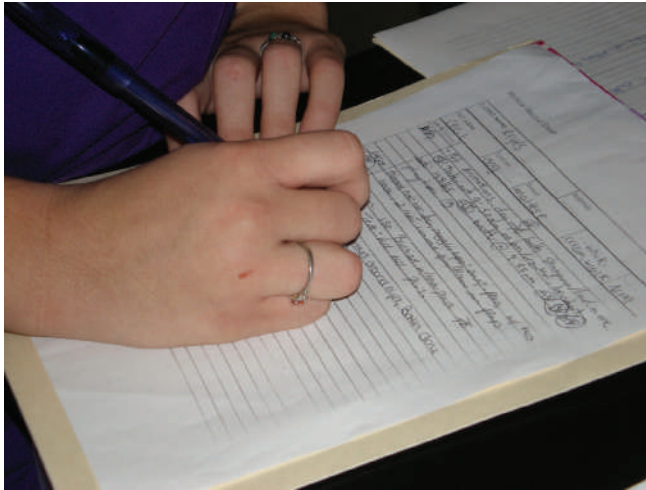


FIGURE 2-1 Accurate record keeping is an important duty of the veterinary assistant.

The original medical record must remain in the facility for at least one to three years from any patient's last visit, depending on state law. Many facilities keep records for at least seven years, depending on the patient's status. This may be done in a storage area that allows easy access to the files. The original record must not be removed from the facility, but copies may be made and sent with the owner or placed in the mail for continued animal health treatments. A facility may not withhold the release of the veterinary medical record contents.

Creating a Medical Record

Each veterinary medical record must contain certain information and paperwork. Owner information and patient information should be obtained and recorded (see Table 2-1). This information may change and should be maintained and updated on a regular basis. Paper medical records often are kept in file folders that are 8 ½" × 11". The owner and patient information should be typed on a label and placed on the folder in the location established by the veterinary facility.

The medical file should include the following sections or forms:

- The client and patient information sheet should be at the beginning for easy retrieval (see Figure 2-2).
- The master problem list details a patient's history and previous medical problems, vaccines, or surgeries (see Figure 2-3).

TABLE 2-1

Owner and Patient Information

OWNER INFORMATION	PATIENT INFORMATION
Name	Name
Address	Species
Phone	Breed
Work Phone	Color
Emergency Contact Numbers	Gender/Sex
Client ID or Chart Number	Age/Birth Date
	Vaccine History
	Allergies
	Surgical History
	Chief Complaint

- **Progress notes** allow for chronological log entries to be recorded each time a patient is seen and treatment is completed (see Figure 2-4).
- Laboratory reports should include veterinary test results.
- Radiology reports detail X-rays, including proper identification of hospital name, date, name of client, name of patient, and positional marker.
- Pharmacy records note all medications prescribed. If the medications prescribed are controlled substances, a controlled substance log must also be maintained.
- Surgical and anesthesia reports identify surgical procedures.
- **Consent forms** include any form signed by the client for surgery and clinical procedures (see Figure 2-5).

When assembling the medical record, it may also be helpful to make a **cage card** for the animal. The cage card is used to identify and locate each patient within the facility (see Figure 2-6).

Each veterinary facility will have a preference for medical forms that are used and the sequence in which they will be placed in the medical record. It is important that each medical file be kept in the same format, with the information in the same location, for ease of use.

Once the veterinarian recommends a specific treatment, an estimate sheet will be prepared for the client. This outlines the recommended procedures or treatments and all associated costs. This will be reviewed with the client. The client will be required to sign authorization or consent forms before the

DATE _____		CASE NUMBER _____	
CLIENT/PATIENT INFORMATION FORM			
Please provide the following information for our records: PLEASE PRINT!			
OWNER INFORMATION			
Owner's Name		Social Security Number	
Street Address			
City/State		Zip Code	Country
Telephone (Include Area Code)	Home		Business
Driver's License Number	Place of Employment	How Long Employed?	
ANIMAL INFORMATION			
Animal Species (Dog, Cat, Other)		Breed	
Animal's Name		Sex	Has the animal been altered? <input type="checkbox"/> YES <input type="checkbox"/> NO
Color	Birth Date	THE UNDERSIGNED OWNER OR AGENT CERTIFIES THAT THE HEREIN DESCRIBED ANIMAL HAS A MAXIMUM VALUE OF APPROXIMATELY \$. _____	
REFERRAL INFORMATION			
Were you referred by a veterinarian?			
<input type="checkbox"/> YES	<input type="checkbox"/> NO	If so, complete the following information.	
Veterinarian's Name		Phone	
Street Address			
City/State		Zip Code	
<p>You will be advised of estimated cost and anticipated procedures. Please feel free to discuss the proposed treatment and any costs with the veterinarian. A minimum deposit of 50 percent of the initial estimated charges will be required for hospitalization of the patient.</p>			
<p>STATEMENT OF OWNERSHIP AND CONSENT: I am the owner of the above-described animal or have authorization from the owner to consent to its treatment.</p> <p>I hereby authorize the performance of professionally accepted diagnostic, therapeutic, anesthetic, and surgical procedures necessary for its treatment.</p> <p>I accept financial responsibility for these services.</p> <p>I have read the above consent and understand why these procedures may be necessary. I have also been told of the possible complications and alternatives to the anticipated procedures.</p>			
PAYMENT CHOICE: <input type="checkbox"/> Cash <input type="checkbox"/> Check <input type="checkbox"/> Bank Card			
SIGNATURE (Owner/Agent)		DATE	

FIGURE 2-2 Sample client/patient information form.

CITY ANIMAL HOSPITAL Master Problem List											
OWNER INFORMATION											
Owner Name <input type="checkbox"/> Mr. <input type="checkbox"/> Miss <input type="checkbox"/> Ms. <input type="checkbox"/> Mrs.						Patient/Pet's Name					
Address						City/State/Zip					
Home Phone						Business Phone					
PATIENT/PET INFORMATION											
Chart # _____				Species _____				Breed _____			
Patient _____				Sex <input type="checkbox"/> F <input type="checkbox"/> M <input type="checkbox"/> N				Birth Date _____			
Color _____								Weight _____			
Vax History _____											
IMMUNIZATION/PREVENTATIVE RECORD											
DATE											
RABIES											
DA2PL											
FVR-CP											
FELV											
FECAL											
PROBLEM LIST											
PROBLEM								DATE ENTERED	DATE RESOLVED		
1.											
2.											
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											
11.											
12.											
13.											

FIGURE 2-3 Sample master problem list.

veterinarian can begin to provide the recommended procedures or treatments. The authorization form serves as a contract between the client and the veterinarian.

After treatments or procedures are completed, the client will receive a discharge sheet. This contains

instructions for the client on care of the animal while recuperating, such as how to give prescribed medications or care for surgical incision sites.

The invoice should be placed on the top of the chart so the veterinarian and all staff members have easy access to a working list of itemized charges. The invoice

PROGRESS NOTES				
PROGRESS NOTES				
Client Name: _____			Address: Phone: _____	
Pet Name: _____	Species: _____	Breed: _____	Color: _____	Gender: _____ Age: _____
Date/Initials				
	S			
	O			
	A			
	P			

FIGURE 2–4 Sample progress note.

can easily be removed during the patient’s discharge and totaled up for the client (see Figure 2–7).

Invoicing and Fees

It is important for every member of the veterinary health care team to have a basic knowledge of the invoicing and billing procedures used in the practice. Generally, the veterinary receptionist collects client payments and handles invoicing and receipts. However, some circumstances may occur when other members of the team may be in the situation of

handling these tasks. This requires training in handling money, basic mathematical skills, and communication skills.

The **invoice** is commonly called the bill and outlines the fees that the client must pay (see Figure 2–8). The receipt states the bill has been paid and what type of payment was made. An invoice and receipt may be the same item that notes the bill has been paid. The fee structure in clinics is based on the type of services and procedures that are provided. The fee structure lists the prices or costs of the service. Some facilities will use a **travel sheet** that lists codes according to the procedure

CITY HOSPITAL
ANY STREET
ANY TOWN, XX 00000

CONSENT FORM

Owner's Name: _____ Animal's Name: _____

Address: _____ Species: _____

_____ Breed: _____

Case Number: _____ Sex: _____

I am the owner or agent for the owner of the above-described animal and have the authority to execute this consent.

I hereby consent to the hospitalization of the above-described animal and authorize the veterinarian and staff to administer any tests, medications, anesthesia, or surgical procedures that the veterinarian deems necessary for the health, safety, and well-being of the animal.

I specifically request the following procedure(s) or operation(s):

I understand that during the course of the above-mentioned procedure(s) or operation(s), unforeseen conditions may be discovered that necessitate an extension of the above-mentioned procedure(s) or operation(s) or additional procedure(s) or operation(s). I hereby consent to and authorize the performance of such procedure(s) or operation(s) as are necessary according to the veterinarian's professional judgment.

I also authorize the use of appropriate anesthetics and other medications. I understand that the veterinary support personnel will be employed as necessary according to the veterinarian's professional judgment.

I have been advised as to the nature of the procedure(s) or operation(s) to be performed and the risks involved. I realize that results cannot be guaranteed.

I understand that all fees for professional services are due at the time of discharge.

I have read and understand this authorization and consent.

Additional Comments/Information:

Date _____ Signature of Owner or Agent _____

Signature of Witness _____

FIGURE 2-5 Sample consent form.

or service (see Figure 2-9). The travel sheet is used by the veterinary team to circle or note the services that have been provided to the patient. The veterinary receptionist or other veterinary team member will then enter the fees into a computer or onto an invoice. This is how a client

is charged for the services the veterinary hospital has provided. It is important for all members of the team to understand the costs involved with the services. Many procedures involve the use of equipment, supplies, staff assistance, and inventory fees. Customers may ask why